Eastern Bering Sea 2013 Report Card

- The North Pacific atmosphere-ocean system during 2012-2013 reflected a combination of a **mostly near-neutral ENSO and intrisic variability**. **Neutral ENSO is expected again this winter**.
- **Ocean temperatures remained cool and sea ice remained extensive**. Dates of sea ice retreat, summer surface and bottom temperatures, and the extent of the cold pool were very similar to those during 2007.
- The summer ***Calanus* copepod time series showed an increase in abundance** in 2011 relative to 2010, but remained below the 2009 peak. 2011 was **the fourth year that concentrations remained well above average**, following patterns also seen in fall zooplankton abundance during cold years.
- **Jellyfish remained abundant** during summer, following a new peak fall biomass recorded in 2012.
- **Survey biomass of motile epifauna** has been **above its long-term mean** since 2010 and fairly stable since the early 1990s. However, the trend of the last 30 years shows a **decrease in crustaceans** (especially commercial crabs) and a **long-term increase in echinoderms**, including brittle stars, sea stars, and sea urchins. It is not know the extent to which this reflects changes in survey methodology rather than actual trends.
- **Survey biomass of benthic foragers has remained stable** since 1982, with interannual variability driven by short-term fluctuations in yellowfin and rock sole abundance.
- **Survey biomass of pelagic foragers has increased steadily** since 2009 and is currently above its 30-year mean. While this is primarily driven by the **increase in walleye pollock** from its historical low in the survey in 2009, it is also a result of **increases in capelin from 2009-2013**, perhaps due to cold conditions prevalent in recent years.
- **Fish apex predator survey biomass is currently near its 30-year mean**. **The increase since 2009** back towards the mean is driven primarily by the increase in Pacific cod from low levels in the early 2000s. **Arrowtooth flounder**, while still above its long-term mean, **has declined nearly 50% in the survey from early 2000s** highs, although this may be due to a distributional shift in response to colder water over the last few years, rather than a population decline.
- **Thick-billed murre reproductive success on St. George Island was above average** in 2013, suggesting that **foraging conditions were favorable for piscivorous seabirds**.
- **Northern fur seal pup production for St. Paul Island increased from the previous count in 2010, but overall numbers remain low**. 2012 was the first year that pup production has not declined since 1998.
- The maximum potential **area of seafloor habitat disturbed by trawl gear in 2012 decreased slightly** from 2011, which was the highest level since 1998. The cause of the increase may be due to increased search time for pollock and/or avoidance of salmon bycatch.

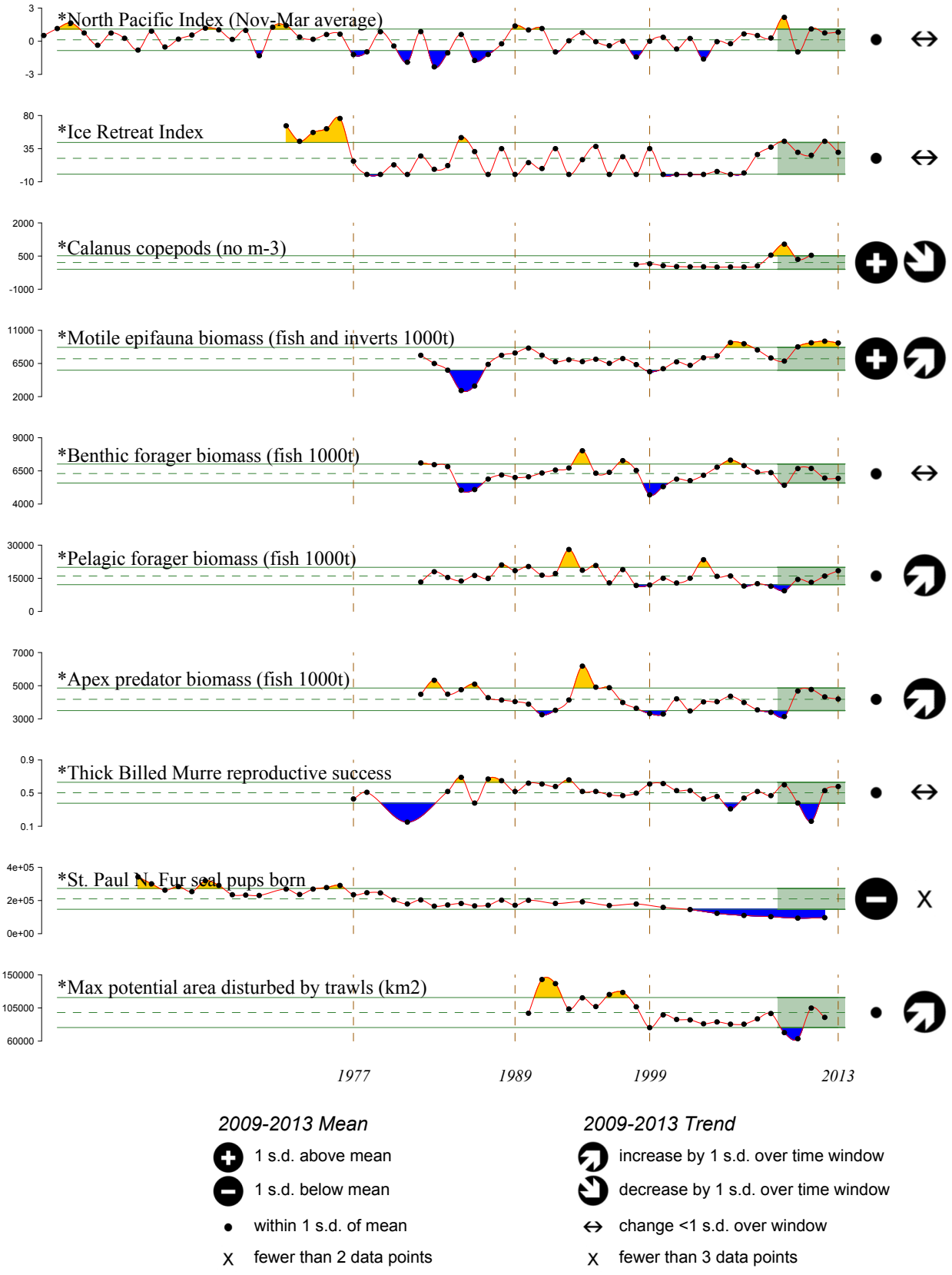

Figure 1: Eastern Bering Sea ecosystem assessment indicators; see text for descriptions. * indicates time series updated in 2013.